

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### Unicorr Packaging Group

#### Massachusetts Manufacturing Extension Partnership

#### Kaizens Keep Unicorr Packaging Group Thinking Outside the Box

##### Client Profile:

Unicorr Packaging Group, a division of the Massachusetts Container Corporation, is located in Marlborough, Massachusetts. The full-service company specializes in corrugated boxes and can assist clients from sales to design and printing. Products range from simple pads, regular slotted cartons and die-cuts to complicated point of purchase displays and retail packaging. The company employs 104 people.

##### Situation:

Unicorr's Massachusetts facility had experienced financial difficulties. Prices had to stay low to satisfy and retain customers. Additionally, 75 percent of what the plant produced was being warehoused. "For the longest time, the philosophy was that the Corrugator had to run to make money," said Helene Blanchette, Unicorr's Corporate Director of Lean Enterprise. "The mind set was that the machines always had to be operating, regardless of whether or not anyone was paying for what they produced," she said. With multiple facilities to deal with, Blanchette knew that there was a limit as to how much she could facilitate on her own and convinced upper management that involvement with the Massachusetts Manufacturing Extension Partnership (MassMEP), a NIST MEP network affiliate, would be beneficial.

##### Solution:

Unicorr Packaging Group was introduced to MassMEP by Bill Baldino of Associated Industries of Massachusetts (AIM). AIM had provided some soft skills training work with Unicorr and knew that MassMEP would be able to assist the company with their Lean Implementation. MassMEP's Jim Gusha met with Blanchette, Ed Santiago, Unicorr's Plant Superintendent, and other members of the management team to discuss their company's needs. He also assisted Blanchette in applying for a Workforce Training Fund Grant after explaining what the grant could provide, the potential cost to company and the return on investment (ROI) they could expect from training the employees at this location.

MassMEP provided basic Lean training for all Unicorr employees to familiarize them with Lean terms and principles. They focused on Value Stream Mapping (VSM) to identify process wastes followed by Kaizens events to remove or eliminate the wastes. MassMEP associate Laura Walta facilitated many of the Lean training activities with Unicorr employee groups while another associate, Jose Garcia, provided training for the Spanish speaking employees. "MassMEP provided Unicorr with a working process of some long and short-term improvements that would need to be accomplished," said MassMEP project manager John Killam. "The first step was to make some usable work space in the manufacturing area. VSM exercises helped the company decide which material had a purpose and which was clutter and could be eliminated to simplify and organize the work environment. They were able to reclaim space and identify other areas where processes could be improved. We worked with employees at the ground level up to management. I was impressed with the involvement of the staff

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and their commitment to following through with the new techniques they learned."

As a result of MassMEP's assistance, ten conveyor lines were removed from the plant floor and the space was repurposed to house a color coded hanging rack system for over 5,000 printing plates. The system is very visual; it is easy to find what you need since the plates are arranged by job and are hung to prevent damage. The print jobs are stored on computers and printed out with pictures so non-English speaking employees can understand how to process the job. Through various Kaizen activities, changes and improvements were made throughout the plant. These included moving and relocating both the shipping and plating areas and revamping the warehouse. Chuck Judson, Unicorr's Maintenance Supervisor, said, "During the 6S Kaizen event in maintenance, we cleaned, sorted, and threw out dumpsters full of old, obsolete or broken parts and then started from scratch." Now the maintenance department is a well organized area with color coding and labeling, shadow boards and bright energy efficient lighting. Parts are arranged according to the machine they go to. "Anyone working in maintenance can quickly find what they need to make repairs or improvements," he added. One of the most fulfilling projects at Unicorr involved a team from the machine shop working to determine better ways to maintain machinery. This has freed up the maintenance staff to handle the more critical situations. In the maintenance storage room they disposed of old machinery and clutter and created an area to make up their own hydraulic hoses.

Continuous improvement is evident all over the plant. The old shipping office was torn down and a new shipping office was built on the plant floor to be accessible to the processes that utilize it. As an ISO certified facility, Unicorr documents and posts procedures and signage. For one very loud machine they have developed their own hand signals for communicating and have made posters so that these signals are the standard for whoever operates the machines. Unicorr is a certified waste water facility so water from the corrugated making processes is collected and cleaned and either reused in the process or on shop floor for other cleaning/washing purposes. Corrugated is made of biodegradable paper with a corn starch based adhesive. Scrap corrugated is baled, weighed and shipped back to the mill to make into paper again. An ink supermarket has been set up with Kanbans on racks which are color coded according to which machine they are used on. At the employees suggestion, job tickets were redesigned to highlight the job number in large characters which can be seen from a distance. Quality is tested throughout the manufacturing process to make sure that the product meets specifications but also to look for indications of problems with machinery. The entire warehouse has been revamped from moving doors and departments to cleaning and organizing. As a result of MassMEP's help, the plant is cleaner, more visual, and well organized.

#### **Results:**

- \* Realized a cost savings of 15 percent.
- \* Increased productivity from 4.6 percent to 22.35 percent.
- \* Improved on-time delivery by 10 percent.
- \* Improved man hours by 7.9 percent.
- \* Reduced customer dissatisfaction by 70 percent.

#### **Testimonial:**

"The attitude has changed. Supervisors now see that if they involve the people from the floor that the message is spread further, and buy-in happens. We have had events and people really enjoy the team spirit."

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Helene Blanchette, Corporate Director of Lean Enterprise